What is Claimed is:

1. A saddle-straddling type motor vehicle, comprising:

a body frame situated from a front part to a rear part of said motor vehicle; and

an air-cooled engine attached to said body frame,

said body frame including

a head pipe disposed approximately uprightly in the front part of said motor vehicle; and

a main frame extending rearward and obliquely downward from said head pipe, and

said air-cooled engine including

a cylinder block forming a cylinder that reciprocatably accommodates a piston;

a cylinder head forming a combustion chamber together with said cylinder block and having a primary passage communicating with said combustion chamber through an intake valve opening;

an intake valve provided to open and close said intake valve opening;

a fuel injection device having an injection nozzle that injects fuel; and

a secondary passage that branches off from upstream of said primary passage and that guides air to a vicinity of said injection nozzle of said fuel injection device at least when said air-cooled

engine is idling;

said cylinder head being located in a front part under said main frame and said cylinder block being located in a rear part under said main frame such that a center axis of said cylinder extends approximately horizontally in a front-to-rear direction of said motor vehicle and so that said cylinder head is hit by a wind when said motor vehicle runs, and

said fuel injection device being provided in said cylinder head so that said fuel injection device injects the fuel toward said intake valve opening from an injection passage in a side wall of said primary passage.

2. The saddle-straddling type motor vehicle according to claim 1, wherein said primary passage extends approximately uprightly from said intake valve opening, said intake valve is located so that its axis extends approximately in the front-to-rear direction, and said fuel injection device is located at an incline between said primary passage and said intake valve.

3. The saddle-straddling type motor vehicle according to claim 1, wherein said primary passage extends approximately uprightly from said intake valve opening, said intake valve is located so that its axis extends approximately in the front-to-rear direction, and said fuel injection device is located at an incline on a side of said primary passage.

4. The saddle-straddling type motor vehicle according to claim

1, wherein said air-cooled engine further comprises:

a throttle body extending upward from said primary passage; and

a first opening/closing mechanism capable of opening and closing in said throttle body,

and wherein said secondary passage branches off from a part of said throttle body that is upstream of said first opening/closing mechanism.

5. The saddle-straddling type motor vehicle according to claim 4, wherein said engine further comprises a second opening/closing mechanism capable of opening and closing and located, in said throttle body, upstream of the part from which said secondary passage branches off.

6. The saddle-straddling type motor vehicle according to claim 5, wherein, when no load is placed on said engine and when a load equal to or smaller than a first value is placed on said engine, said first opening/closing mechanism is approximately full closed and an open degree of said second opening/closing mechanism is controlled by an operation by a rider.

7. The saddle-straddling type motor vehicle according to claim 6, wherein, when a load larger than said first value is placed on said engine, an open degree of said first opening/closing mechanism is controlled by an operation by the rider, and the open degree of said second opening/closing mechanism is controlled in association with

said first opening/closing mechanism.

8. The saddle-straddling type motor vehicle according to claim 7, wherein, when the load placed on said engine is equal to or smaller than a second value that is larger than said first value, an air flow rate in said secondary passage increases as the load placed on said engine increases, and when the load placed on said engine exceeds said second value, the air flow rate in said secondary passage decreases.

9. The saddle-straddling type motor vehicle according to claim 8, wherein, while the load placed on said engine is larger than said second value, the air flow rate in said secondary passage remains approximately constant.

10. The saddle-straddling type motor vehicle according to claim 9, wherein, when the load placed on said engine is larger than said first value, an air flow rate in said primary passage increases as the load placed on said engine increases.

11. The saddle-straddling type motor vehicle according to claim 1, wherein a distance from a tip of said injection nozzle of said fuel injection device to said intake valve opening is 4 cm or less.

12. The saddle-straddling type motor vehicle according to claim 1, wherein said fuel injection device is situated so that at least part of said fuel injection device is exposed outside from said cylinder head.

13. The saddle-straddling type motor vehicle according to

claim 1, wherein said fuel injection device is situated to incline obliquely upward toward a front with respect to a horizontal direction.

14. The saddle-straddling type motor vehicle according to claim 1, wherein said intake valve is located so that its axis is inclined obliquely upward toward a front at an angle larger than 0 degree and smaller than 45 degrees with respect to a horizontal direction.

15. The saddle-straddling type motor vehicle according to claim 14, wherein said cylinder head has an exhaust passage that guides burned gas outside from said combustion chamber through an exhaust valve opening,

said engine further comprises an exhaust valve provided to open and close said exhaust valve opening, and

said exhaust valve is situated so that its axis is inclined obliquely downward toward the front at an angle larger than 0 degree and smaller than 45 degrees with respect to the horizontal direction.

16. A saddle-straddling type motor vehicle, comprising:

an air-cooled engine attached to a body frame and having a cylinder block located on a rear side in a direction in which said motor vehicle runs and a cylinder head located on a front side in the direction in which said motor vehicle runs;

a primary passage that guides air into a combustion chamber of said air-cooled engine;

a fuel injection device having an injection nozzle that injects fuel in said primary passage; and

a secondary passage that branches off from upstream of said primary passage and that guides air to a vicinity of said injection nozzle of said fuel injection device at least when said air-cooled engine is idling,

said fuel injection device being located further forward than said cylinder block in the direction in which said motor vehicle runs.

17. The saddle-straddling type motor vehicle according to claim 16, wherein said air-cooled engine further comprises an intake valve located at a border between said primary passage and said combustion chamber, and

said fuel injection device is situated at an incline between said primary passage and said intake valve.

18. The saddle-straddling type motor vehicle according to claim 16, wherein said body frame includes:

a head pipe disposed approximately uprightly in a front part of said motor vehicle; and

a main frame extending rearward and obliquely downward from said head pipe.